VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 24, 2004

10 CFR 50.54(f)

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
11555 Rockville Pike
Rockville, Maryland 20852

Serial No. 03-459D
NAPS/JHL R0
Docket No. 50-339
License No. NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
NORTH ANNA POWER STATION UNIT 2
SIXTY-DAY RESPONSE TO NRC BULLETIN 2003-02
LEAKAGE FROM REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY

On August 21, 2003 the NRC issued NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity." The bulletin informed licensees that based on previous indications of cracking on the upper RPV head penetrations in the industry and the recent leakage indications identified on the two lower RPV head penetrations at South Texas Project Unit 1, the current methods of inspecting the RPV lower heads may need to be supplemented with additional measures (e.g., bare-metal visual inspections) to detect reactor coolant pressure boundary (RCPB) leakage. The bulletin requested licensees to provide a description of the inspection programs for the reactor pressure vessel (RPV) lower head penetrations that have been previously implemented at their plants, as well as a description of the inspection programs that they will be implementing during the next and subsequent refueling outages. This information was provided for North Anna Units 1 and 2 in a letter dated November 17, 2003 (Serial No. 03-459A).

The bulletin also requested that a summary report be submitted to the NRC within 60 days of plant restart following the next inspection of the RPV lower head penetrations. The report is to include the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found. Dominion performed the requested inspection of the Unit 2 RPV lower head penetrations during the Spring 2004 refueling outage that was completed on May 30, 2004. The requested 60-day response documenting the inspection of the RPV lower head penetrations for North Anna Unit 2 is provided in the attachment.

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If you have any questions or require additional information, please contact Mr. Thomas Shaub at (804) 273-2763.

Very truly yours,

L. N. Hartz
Vice President – Nuclear Engineering

Attachment

Sixty-Day Response to NRC Bulletin 2003-02, Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity, North Anna Power Station Unit 2

Commitments made in this letter: None

cc: U.S. Nuclear Regulatory Commission
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Mr. M. T. Widmann
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North Anna Power Station

Mr. M. Grace – ANII
North Anna Power Station

SN: 03-459D
Docket Nos.: 50-339
Subject: 60 Day Response to NRC Bulletin 2003-02

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Leslie N. Hartz, who is Vice President - Nuclear Engineering, of Virginia Electric and Power Company. She has affirmed before me that she is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of her knowledge and belief.

Acknowledged before me this 24th day of June, 2004.

My Commission Expires: March 31, 2008.

Notary Public

(SEAL)

ATTACHMENT

Sixty-Day Response to NRC Bulletin 2003-02
Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity

North Anna Power Station Unit 2

Virginia Electric and Power Company
(Dominion)

Sixty-Day Response to NRC Bulletin 2003-02
Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity

North Anna Power Station Unit 2

On August 21, 2003 the NRC issued Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity." The bulletin requested licensees to provide information related to inspections that have been performed to verify the integrity of the reactor pressure vessel (RPV) lower head bottom-mounted instrumentation (BMI) penetration nozzles within sixty-days of the completion of the outage in which the inspections were completed. The sixty-day response for North Anna Power Station Unit 2 is provided below.

Requested Information

Within 60 days of plant restart following the next inspection of the RPV lower head penetrations, subject PWR addressees should submit to the NRC a summary of the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.

Response

Station Procedure 2-PT-48.4, Bare Metal Inspection of Vessel BMI Nozzles, was performed on the RPV lower head to inspect for any potential boric acid leakage from the bottom-mounted instrumentation nozzles. No evidence of leakage was discovered on the outside of the RPV lower head insulation. The RPV lower head insulation panels were removed to allow access to the instrumentation nozzles. The nozzle inspection was performed by VT-2 Level II certified individuals by either direct visual inspection or by visual inspection aided by the use of mirrors. A 360-degree bare-metal visual examination of the 50 bottom-mounted instrumentation penetration nozzles was performed. No evidence of leakage or lower head wastage was observed. Since there were no boric acid deposits, no dispositions or corrective actions were required. The inspection identified some minor rusting (not attributed to boric acid corrosion) and paint peeling on the lower head. A supplemental video recording of the penetration nozzles and lower head was made for a baseline reference for future inspection efforts.